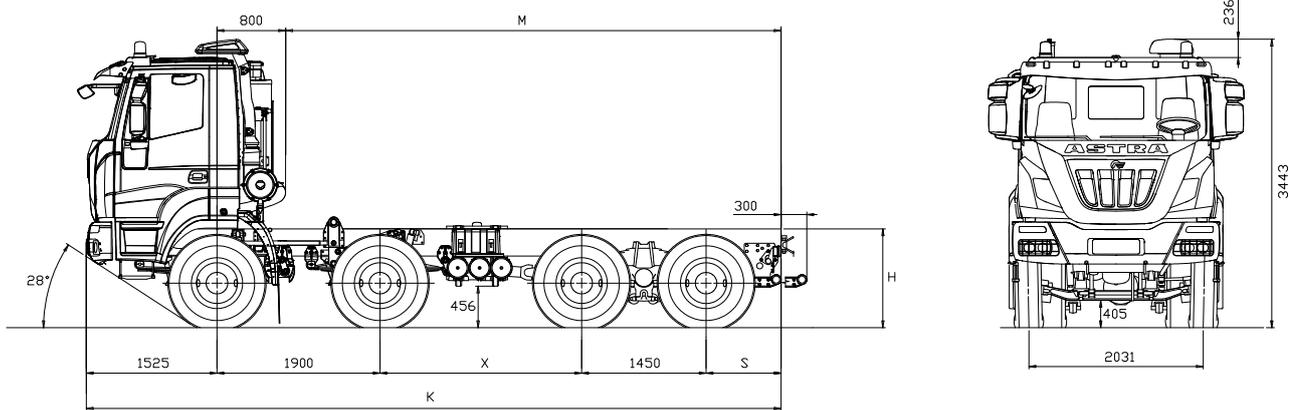



**chassis 8x4**
**84.38 / 84.42 / 84.44 / 84.48 / 84.54**

**DIMENSIONS (mm)**

X	K	M max (*)	S	S ON REQUEST	H		TURNING DIAMETER wall to wall
					unloaded	loaded	
2350	8425	6100	1200	875/1500	1194	1129	19100
2600	8675	6350	1200	875/1500			19900
2850	8925	6600	1200	875/1500			20700
3100	9175	6850	1200	875/1500			21500
3350	9425	7100	1200	1500			22200
3600	9975	7650	1500	-			23000
4100	10475	8150	1500	-			24600
5060	12035	9710	2100	-			27500

(\*) M max.: indicative value to be confirmed by bodybuilder.  
(Tyres 13R22.5)


**WEIGHT (kg)**

Distribution net weight (*)					Max technical weight				
X	1 <sup>st</sup> axle	2 <sup>nd</sup> axle	3 <sup>rd</sup> +4 <sup>th</sup> axle	NET WEIGHT	1 <sup>st</sup> +2 <sup>nd</sup> axle		3 <sup>rd</sup> +4 <sup>th</sup> axle	Gross Vehicle Weight	Gross Combination Weight
2350	3550	3150	4120	10820	16000	18000 (1) (2)	32000 (2)	50000 (2)	121.500
2600	3543	3143	4159	10845					
2850	3536	3136	4194	10865					
3100	3548	3148	4268	10965					
3350	3546	3146	4298	10990					
3600	3534	3134	4363	11030					
4100	3529	3129	4417	11075					
5060	3502	3102	4536	11140					

(\*) Weight including oil, fuel, spare wheel, driver Kg.75, with 13R22.5 tyres  
**(1)** With tyres on front axles 385/65R22.5 or 325/95R24 and reinforced springs (OPT).  
**(2)** With tyres 325/95R24 or max speed limited to 70 Km/h depending on pneus type and brand.  
 Higher speeds are allowed with load reductions subject to Astra technical office approval.  
 Other tyres available, subject to Astra technical office approval.

Technical data and general specifications - validity to be checked according to each individual configuration



## ENGINES

CURSOR 13 turbo intercooler **euro 3** diesel injection/cycle with electronic unit injection pumps. Single block head, four valves per cylinder, light alloy pistons. Total displacement: 12.882 cm<sup>3</sup>. Bore for stroke: 135 x 150 mm. 6 in-line cylinders. Water cooling. Viscostatic cooling fan. Dry air filter with safety cartridge. Vertical muffler.

	84.38	84.42	84.44	84.48	84.54*
Model	CURSOR 13	CURSOR 13	CURSOR 13	CURSOR 13	CURSOR 13
Max power (EEC)	280 kW (380 cv)	309 kW (420 cv)	324 kW (440 cv)	353 kW (480 cv)	397 kW (540 cv)
Corresponding rpm	1.900 rpm				
Max torque (EEC)	1.800 Nm (183 kgm)	1.900 Nm (194 kgm)	2.100 Nm (214 kgm)	2.200 Nm (224 kgm)	2.350 Nm (240 kgm)
Corresponding rpm	1.000-1.440 rpm				1.000-1.690 rpm
Turbine	WG - Waste Gate			VGT - Variable Geometry Turbine	

\*Requires additional engine radiator, for extremely hot climate (>42°C).



## GEARBOX

Manual ZF Ecosplit 4 technology gearbox with servoshift, 16 synchronised forward speeds + 2 reverse:

**ZF16S2220TO:** HD9 84.38/HD9 84.42 / HD9 84.44

**ZF16S2520TO:** HD9 84.48/HD9 84.54

**On request:**

**ZF16S2320TD:** HD9 84.38/HD9 84.42/ HD9 84.44/ HD9 84.48

**ZF ASTRONIC 16AS2630TO:** HD9 84.44/ HD9 84.48/ HD9 84.54

		Speed [kph] at maximum power(*)																		
		Gears																		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	RM1	RM2	
ZF 16S2220TO ZF 16S2520TO	<b>Gear ratios</b>	13.80	11.54	9.49	7.93	6.53	5.46	4.57	3.82	3.02	2.53	2.08	1.74	1.43	1.20	1.00	0.84	12.92	10.80	
	Rear axle ratio	3.793	7.5	8.9	10.9	13.0	15.8	18.9	22.5	27.0	34.1	40.7	49.5	59.2	72.0	85.9	103.0*	122.7*	8.0	9.5
		4.229	6.7	8.0	9.7	11.7	14.2	16.9	20.2	24.2	30.6	36.5	44.4	53.1	64.6	77.0	92.4*	110.0*	7.2	8.6
		5.009	5.7	6.8	8.2	9.8	11.9	14.3	17.1	20.4	25.8	30.8	37.5	44.8	54.6	65.0	78.0	92.9*	6.0	7.2
		5.558	5.1	6.1	7.4	8.9	10.8	12.9	15.4	18.4	23.3	27.8	33.8	40.4	49.2	58.6	70.3	83.7	5.4	6.5
		6.095	4.6	5.6	6.8	8.1	9.8	11.7	14.0	16.8	21.2	25.3	30.8	36.8	44.8	53.4	64.1	76.3	5.0	5.9
		6.588	4.3	5.1	6.3	7.5	9.1	10.9	13.0	15.5	19.6	23.4	28.5	34.1	41.5	49.4	59.3	70.6	4.6	5.5
ZF16S2320TD	<b>Gear ratios</b>	16.41	13.80	11.28	9.49	7.76	6.53	5.43	4.57	3.59	3.02	2.47	2.08	1.70	1.43	1.19	1.00	15.36	12.92	
	Rear axle ratio	3,793	6,3	7,5	9,1	10,9	13,3	15,8	19,0	22,5	28,7	34,1	41,7	49,5	60,6	72,0	86,6	103,0*	6,7	8,0
		4,229	5,6	6,7	8,2	9,7	11,9	14,2	17,0	20,2	25,7	30,6	37,4	44,4	54,4	64,6	77,7	92,4*	6,0	7,2
		5,009	4,8	5,7	6,9	8,2	10,1	11,9	14,4	17,1	21,7	25,8	31,6	37,5	45,9	54,6	65,6	78,0	5,1	6,0
		5,558	4,3	5,1	6,2	7,4	9,1	10,8	12,9	15,4	19,6	23,3	28,5	33,8	41,4	49,2	59,1	70,3	4,6	5,4
		6,095	3,9	4,6	5,7	6,8	8,3	9,8	11,8	14,0	17,9	21,2	26,0	30,8	37,7	44,8	53,9	64,1	4,2	5,0
		6,588	3,6	4,3	5,3	6,3	7,6	9,1	10,9	13,0	16,5	19,6	24,0	28,5	34,9	41,5	49,8	59,3	3,9	4,6

(\*) Max limited speed 90 km/h. Other speeds available, subject to the Astra technical office approval.



## P.T.O.

**On request:**

Gearbox	ZF16S2220TO-ZF16S2520TO	Mx. Torque	Application
P.T.O.	Ratio	Nm	
ZF NH/1b	0,91/1,09:1	1000	For tipping unit pumps, pumps for cranes, ecc.
ZF NH/1c	0,91/1,09:1	1000	For tipping unit pumps, unit pumps for concrete, pumps for cranes, ecc.
ZF NH/4c	1,17/1,40:1	430	For tipping unit pumps, ecc.
ZF N221/10B-PL + NL/1c	1,75/2,09:1+0,91/1,09:1	560+600	double PTO for concrete pumps

**ZF NMV 221 Power take-off** (ratio 1,55:1) max available torque 1300 Nm for concrete pumps.

**ZF NMV 221 Power take-off** (ratio 0,98:1) max available torque 2000 Nm for concrete pumps.

**Power take-off Multipower** (ratio 1,29:1) max available torque 900 Nm for concrete mixers.



## CLUTCH

Single dry plate, diameter 17". Pull type engagement with diaphragm spring.

Hydro-pneumatic power steering engagement control, with driven disk wear recovery slave cylinder.

**On request:** Ceramic clutch 17"



## AXLES

### FRONT

Steering axle, hot moulding in high tensile steel.

Wheel stud protection.

### REAR

Two drive axles in tandem. Double reduction: central with beveled pair, final in the wheel hubs by means of epicycloidal assembly. Torque distribution between the axles by means of a distributor fitted on the intermediate axle. Differential lockable from driver seat. Tandem assembled to the chassis by reaction rods with silentblocks.

#### On request:

Rear-axle ratio 1:3,793

Rear-axle ratio 1:4,229

Rear-axle ratio 1:5,009

Rear-axle ratio 1:5,558

Rear-axle ratio 1:6,095

Rear-axle ratio 1:6,588



## SUSPENSIONS

### FRONT

Parabolic springs, n° 3 leaves 26x90 mm, hydraulic shock absorbers. Standard stabilizer bar on 1<sup>st</sup> axle.

#### On request:

Stabilizer bar on 2<sup>nd</sup> axle.

Reinforced parabolic springs, n° 4 leaves 26x90 mm (mandatory with 9t version).

### REAR

Parabolic springs, swiveling on central pin: n° 4 leaves 40x100mm, torque bars and stiffening brackets.

Standard stabilizer bar on 4<sup>th</sup> axle.

#### On request:

Stabilizer bar on 3<sup>rd</sup> axle.

Extra-reinforced conventional springs, n° 10 leaves 25x100 mm.



## CHASSIS

Special steel with high tensile strength limit, two flat and parallel side members (width 820 mm.), C section (320x90x10mm), cross members bolted to the frame. R.B.M. (Rail Bending Moment): 202.020 Nm (20.593 Kgm.).

Steel front bumpers with headlamp protection grids, front maneuvering hook, rear underrun bar, rubber mud-guard 2<sup>nd</sup> axle, steel fuel tank capacity 300 litres.

#### On request:

Rapid pneumatic connection for tyres inflation.

Rear underrun bar in set back position.

Extra-long underrun bar for concrete mixer.

Rear maneuvering hook.

Rear automatic towing hook.

Rubber mudguards on 3<sup>rd</sup> and 4<sup>th</sup> axle.

Side winch for spare wheel (wheelbase 2350 and 2850 excluded).



## TYRES

**FRONT:** 13R22.5 156/150 G Single tubeless

**REAR:** 13R22.5 156/150 G Twin tubeless

Spare wheel on the chassis.

### Other Possible combinations:

TYRES	ASSEMBLY	
	FRONT	REAR
12.00R20 156/150G	S	D
315/80R22.5 156/150K		
385/65R22.5 160J (*)	S	
315/80R22.5 156/150K		D
325/95R24 162/160K (*)	S	D
12.00R24 160/156G (*)		

S single

D double

(\*) Mandatory with 9 ton front axle load.

Other tyres available, subject to the Astra technical office approval.



## PNEUMATIC SYSTEM

Two-cylinder 630 cc compressor, APU (Air Processing Unit) that includes: regulation valve set at 10.3 bar, drier, 4-way safety valve, pressure reduction valve for parking circuit and services, 3 air tanks, capacity 30 litres + 2 with 20 litres. ABS system and EBL (Electronic Brake Limiter).



## BRAKES

Front and rear "duo-duplex" self-adjusting wedge type brakes with automatic play take-up.

Total net braking surface 12.368 cm<sup>2</sup>.

ABS + EBL system.

**Service brake:** Pedal controlled air brake, acting on all wheels.

**Solo vehicles:** two independent circuits, one for 1<sup>st</sup> and 2<sup>nd</sup> axle: one for 3<sup>rd</sup> and 4<sup>th</sup> axle; 1<sup>st</sup> category wheels antilock system.

**Towing vehicles:** three independent circuits, one for 1<sup>st</sup> and 2<sup>nd</sup> axle, one for 3<sup>rd</sup> and 4<sup>th</sup> axle and another for the trailer; 1<sup>st</sup> category wheels antilock system.

**Emergency brake:** Incorporated in service brake.

**Parking brake:** Mechanical spring-type with pneumatic control acting on 3<sup>rd</sup> and 4<sup>th</sup> axle wheels.

**IVECO BRAKE TURBO engine brake:**

HD9 380/420 HP braking power 255 kW (342 HP)

HD9 440/480/540 HP braking power 300 kW (402 HP)

#### On request:

Hydraulic intarder (HD9 84.38 and HD9 84.42 excluded).

1<sup>st</sup> axle immobiliser system.

OFF/ROAD button for excluding ABS for speed < 15 kph.

**HD9 380/420 cv** - Front and rear "simplex" self-adjusting brakes system.

No ABS system.

No hydraulic intarder



## STEERING

ZF 8099 quadrilateral power steering on front axle wheels with variable ratio 1:22.2/1:26.2 with auxiliary cylinder.

Circuit with main hydraulic pump on engine and emergency pump on gearbox. Steering rods with self-lubricating joints. Height and inclination mechanical adjustable steering wheel.



## SERVICE DATA(I)

Engine oil sump and filters .....	28 (+2,5)
Gearbox oil .....	14,5
Power steering oil.....	18
Cab tipping oil .....	1
Clutch circuit oil.....	0,5
Integral PTO oil.....	3
Intermediate axle with final red. oil.....	27
Rear axle with final red. oil .....	16
Cooling system water.....	33
Diesel.....	300



## ELECTRICAL SYSTEM

Voltage: 24 V  
 Alternator generator 90 A - 28 V (2520 W).  
 Accumulators: 2 in series, 170 Ah.  
 Starter motor 24 V 5,5 kW.  
 Mechanically controlled electrical circuit breaker.  
 Anti-block system ABS with 4-conduits and 4-electric valves electronic system.  
 Phonic wheels and sensors on 1<sup>st</sup> and 3<sup>rd</sup> axle.  
 1 electrical joint 7-pole (ISO 7638) for trailer ABS (if applicable).  
 1 electrical joint 15-pole (ISO 12089-4091) for trailer lighting (if applicable).  
 Offset trim lights.  
 Electrical provision for outfitters.  
 Provision for diagnostics.  
 Provision for radio/cb (without speakers).  
 Glow plug for cold start.  
**On request:**  
 225 Ah accumulators;  
 Reverse alarm.



## CAB

Standard white short cab (AD/HD) built in galvanized pressed steel with hydraulic tilting up to 60°. Cab suspension with 4 helicoidal springs with coaxial shock absorbers and integrated dampers, anti-roll bar and end-of-stroke pads. Tinted electric door windows. Mechanical rear view mirrors, wide angle mirrors and front view mirror. Internal panels completely washable and fireproof. Compressed air quick coupling for cab cleaning. 4-speed ventilation and heating system with air recirculation system. Air suspended 3-way adjustable driver seat with seat belts. Mechanical passenger seat with seat belts.

### On request:

RHD.  
 Air conditioning with anti-pollen filter.  
 Cab rear window.  
 Car radio RDS, CD.  
 Car radio RDS, CD, MP3 Bluetooth technology.  
 External sun visor.  
 Extra colour cab: to be specified in the order.  
 Heated and electric powered rear view mirrors.  
 Remote controlled and centralized closing of doors.  
 Roof hatch.  
 Rotating lights on top of the cab.  
 White engine hood with central mask in IC575 colour.



## INSTRUMENTATION

Dashboard and ergonomic instrument board contain the function buttons and the identification commands.

**Indicator lights:** engine oil low pressure, alternator charging low, main beam lights, side lights, engine warm-up, rear fog light, hazard lights, tractor turn indicators, trailer turn indicators (if applicable), rotating lights, cab lifted, axles differential locked, differential lock, front brakes air pressure low, rear brakes air pressure low, trailer brakes air pressure low (if applicable), parking brake engaged, splitter (reduction on), slow speeds (1-4/9-12), power take-off on (if applicable) air filters clogged, power steering oil level low, rear view mirrors heated (if applicable), ABS, trailer ABS (if applicable), main steering circuit failure, steering auxiliary circuit failure.

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### DEALER

Characteristics and equipment are subject to changes without prior notice.

Technical data and general specifications - validity to be checked according to each individual configuration